



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2013-12-01 that applies to all Rolls-Royce plc (RR) model RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines. AD 2013-12-01 requires a one-time ultrasonic inspection (UI) of low-pressure (LP) compressor blades with more than 2,500 flight cycles since new or last inspection. Since we issued AD 2013-12-01, RR determined that repetitive UIs of the LP compressor blades are needed. This proposed AD would require initial and repetitive UIs of the affected LP compressor blades. We are proposing this AD to prevent LP compressor blade airfoil separations, damage to the engine, and damage to the airplane.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby DE24 8BJ, UK; phone: 44 (0) 1332 242424; fax: 44 (0) 1332 249936. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1327; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7754; fax: (781) 238-7199; email: robert.green@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On June 5, 2013, we issued AD 2013-12-01, Amendment 39-17478 (78 FR 37703, June 24, 2013), (“AD 2013-12-01”), for all RR model RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines. AD 2013-12-01 requires a one-time UI of LP compressor blades that have accumulated more than 2,500 flight cycles since new. AD 2013-12-01 resulted from LP compressor blade partial airfoil release events. We issued AD 2013-12-01 to prevent LP compressor blade airfoil separations, engine damage, and damage to the airplane.

Actions Since Existing AD Was Issued

Since we issued AD 2013-12-01, RR's service experience and updated analysis has determined the need for repetitive inspections of the LP compressor blades. Also since we issued AD 2013-12-01, the European Aviation Safety Agency (EASA) has issued EASA AD 2014-0031, dated February 4, 2014, which requires repetitive inspection of the LP compressor blades.

Relevant Service Information

We reviewed RR Alert Non-Modification Service Bulletin No. RB.211-72-AH465, dated July 15, 2013. The service information describes procedures for an initial UI followed by repetitive UIs of the affected LP compressor blades.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require an initial UI of LP compressor blades at 3,600 cycles since new or before further flight. For LP compressor blades that exceed 2,200 cycles since last inspection (CSLI), the AD would require a UI before exceeding 3,000 CSLI or before further flight. This proposed AD would also require repetitive UIs of the affected LP compressor blades every 2,400 CSLI thereafter.

Costs of Compliance

We estimate that this proposed AD would affect 56 engines installed on airplanes of U.S. registry. We also estimate that it would take about 44 hours per engine to comply

with the initial inspection requirements in this proposed AD. The average labor rate is \$85 per hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$209,440.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2013-12-01, Amendment 39-17478 (78 FR 37703, June 24, 2013), and adding the following new AD:

Rolls-Royce plc: Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

This AD supersedes AD 2013-12-01, Amendment 39-17478 (78 FR 37703, June 24, 2013).

(c) Applicability

This AD applies to Rolls-Royce plc (RR) model RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines, with low-pressure (LP) compressor blade, part numbers (P/Ns) FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, installed.

(d) Unsafe Condition

This AD was prompted by LP compressor blade partial airfoil release events. We are issuing this AD to prevent LP compressor blade airfoil separations, engine damage, and damage to the airplane.

(e) Actions and Compliance

Unless already done, do the following actions.

(1) Ultrasonic Inspection (UI) of LP Compressor Blade

(i) After the effective date of this AD, ultrasonically inspect each LP compressor blade before the blade exceeds 3,600 cycles since new (CSN) or before further flight, whichever occurs later. Repeat the UI of the blade every 2,400 cycles since last inspection (CSLI).

(ii) For any LP compressor blade that exceeds 2,200 CSLI on the effective date of this AD, inspect the blade before exceeding 3,000 CSLI or before further flight, whichever occurs later. Thereafter, perform the repetitive inspections required by this AD.

(iii) Use paragraph 3, excluding subparagraphs 3.A.(9), 3.B.(5), 3.C.(4), 3.D.(3), 3.E.(5), 3.F.(10), and 3.G.(7), of RR Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AH465, dated July 15, 2013, to perform the inspections required by this AD.

(2) Use of Replacement Blades

LP compressor blades, P/Ns FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, that have accumulated at least 3,600 CSN or 2,400 CSLI are eligible for installation if the blade has passed the UI required by this AD.

(f) Credit for Previous Actions

If you performed a UI of an affected LP compressor blade before the effective date of this AD using RR NMSB No. RB.211-72-G702, dated May 23, 2011; or RR NMSB No. RB.211-72-G872, Revision 2, dated March 8, 2013, or earlier revisions; or RR NMSB No. RB.211-72-H311, dated March 8, 2013; or Engine Manual E-Trent-1RR, Task 72-31-11-200-806, you have met the initial inspection requirements of this AD. However, you must still comply with the repetitive 2,400 CSLI requirement of this AD.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(h) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7754; fax: (781) 238-7199; email: Robert.Green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2014-0031, dated February 4, 2014, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2012-1327.

(3) RR Alert NMSB No. RB.211-72-AH465, dated July 15, 2013, pertains to the subject of this AD and can be obtained from Rolls-Royce plc, using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby DE24 8BJ, UK; phone: 44 (0) 1332 242424; fax: 44 (0) 1332 249936.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on May 19, 2014.

Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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